down and the enzyme pass into solution while the protoplasm is living, but in others the combination may persist, even after the death of the protoplasm. The enzyme may be rendered soluble also by external chemical or physical influences. These probably act by destroying the integrity of the cell and allowing the contact of substances which have been localized in the living protoplasm. On maturity of the tissues the enzyme is generally liberated, possibly by autodigestion or other profound change in the protoplasm."—C. R. B.

Fixation of free N.—HANNIG, holding that HILTNER'S statement as to fixation of free nitrogen by *Lolium temulentum* rested upon objectionable methods of experimentation, has reinvestigated the matter and confirms the latter's results.[9] About 100 per cent. increase in N of the crop over that in the seed is reported with the fungus-infested plants when N was excluded from the culture; whereas there was practically no increase in fungus-free plants. This is claimed to be the first demonstration of the fixation of free N by ectotrophic mycorhiza.—C. R. B.

Zeitschrift für Botanik.—On account of repeated and continued misunderstandings between the publisher of the *Botanische Zeitung* and its editors, FRIEDRICH OLTMANNS and GRAF ZU SOLMS-LAUBACH, the editors will sever their connection with that journal December 31, 1908, and, assisted by L. JOST, will found a new journal, *Zeitschrift für Botanik*, which will be published by Gustav Fischer of Jena. The journal will be a monthly, in the form of the BOTANICAL GAZETTE, and will contain both original investigations and critical reviews. The subscription price is 24 marks.

CO_2 from dead tissues.—NABOKICH reports in a preliminary paper[10] that CO_2 is given off by dead seeds and seedlings of various plants, no matter how killed. He is apparently oblivious of the fact that COPELAND has already described the same phenomenon in dead water plants,[11] and BECQUEREL in seed coats.[12]—C. R. B.

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[9] HANNIG, E., Die Bindung freien atmosphärischen Stickstoffes durch pilzhaltiges *Lolium temulentum*. Ber. Deutsch. Bot. Gesells. **26a**:238–246. 1908.

[10] NABOKICK, A. J., Ueber die Ausscheidung von Kohlensäure aus toten Pflanzenteilen. Ber. Deutsch. Bot. Gesells. **26a**:324–332. 1908.

[11] COPELAND, E. B., Chemical stimulation and the evolution of carbon dioxid. BOT. GAZETTE **35**:81–98, 160–183. 1903.

[12] BECQUEREL, PAUL, Recherches sur la vie latente de graines. Ann. Sci. Nat. Bot. IX. **5**:193–320. 1907.